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ABSTRACT

This booklet is aimed at school students desiring to improve their lifelong learning skills. Part 1 is a checklist to help students determine their preferred learning styles, including sense modalities (reading, listening, viewing pictures or diagrams, touching, or moving) and best learning conditions (preferred sounds, lighting, temperature, seating, time of day, and munchies). Part 2 presents background information on lifelong learning, offering a rationale for learning independently (to do a job well, satisfy one's curiosity, manage information overload, and deal with changing workplaces, career changes, and new technologies) and introducing the importance of good attitude. Part 3 discusses activities for strengthening lifelong learning skills, elaborating on the need to develop positive attitudes toward learning and giving practical suggestions for improving reading, writing, speaking, listening, research, independent learning, study, and higher order thinking skills. Students are advised on how to think about thinking and tackle problem solving. Included are a brief list of resources and an appendix serving as an assignment organizer. (MLH)

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ED 422 607

Research You Can Use
Lifelong Learning

Booklet 4

From High School Student to Lifelong Learner Your Route to Independence

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Research You Can Use Lifelong Learning

Booklet 4

From High School Student to Lifelong Learner Your Route to Independence

Kathleen Cotton

Northwest Regional Educational Laboratory

School Improvement Program
Robert E. Blum, Director

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Other Resources In This Series

You may be interested in getting the other booklets in this Lifelong Learning series:

- *Lifelong Learning Skills for the Preschool/Kindergarten Child: Tips for Parents* (Booklet 1)
- *Lifelong Learning Skills for the Elementary School Child: Tips for Parents* (Booklet 2)
- *Lifelong Learning Skills for the Middle/Junior High School Student: Tips for Parents* (Booklet 3)

and for teachers and principals

- *Education for Lifelong Learning: Literature Synthesis* (Booklet 5)

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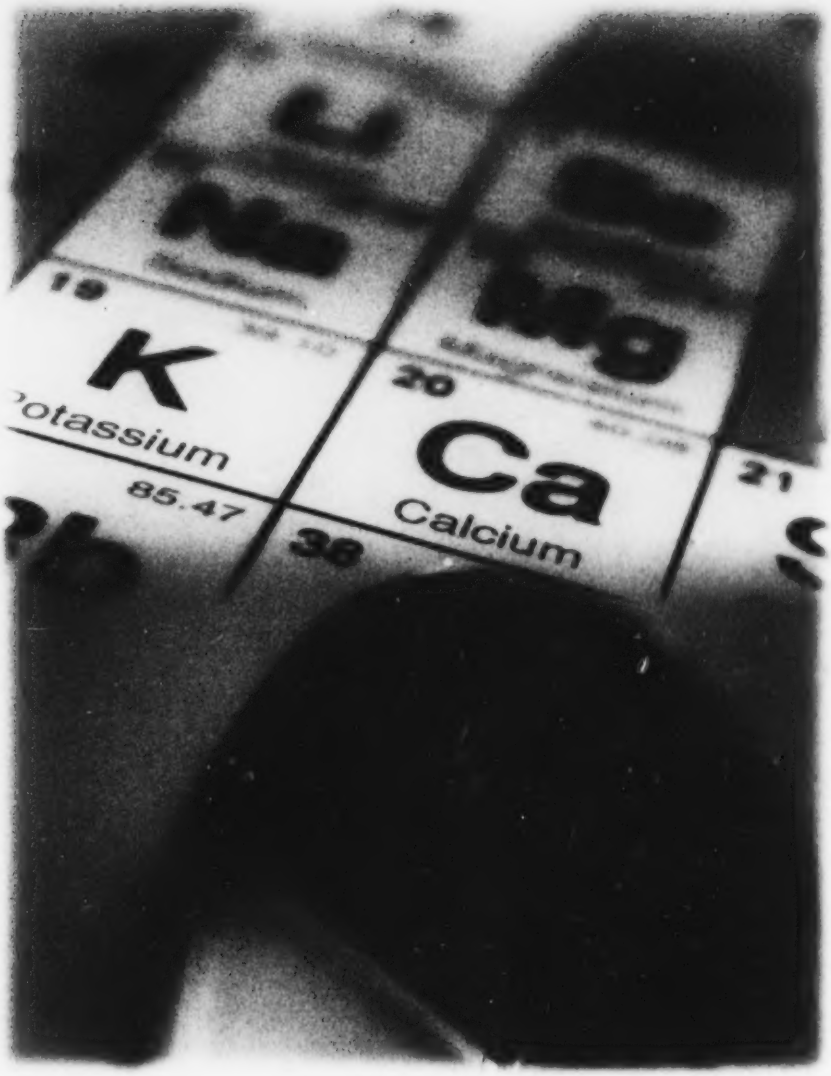
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Part 1:

What's Your Learning Style?

Research You Can Use Teaching Learning

Everybody has a learning style, and the more you know about yours, the better you will be at planning and carrying out learning activities.

You've been in school for quite awhile, and so you know a lot about your learning style already. For example, you probably know whether you learn best from reading, listening, looking at pictures and diagrams, touch, or movement. Perhaps you also know the time of day you learn best and what kind of lighting and temperature are most comfortable for you.

Your answers to the following questions will give you a beginning profile of yourself as a learner.

First, a few questions about the *sense modality* part of learning style (that is, through what sense or senses you learn best):

< ***Section A: Sense Modality***

1. Would you rather
   ___watch a video of a story, or
   ___act out the story yourself?

< Read or listen?

2. Do your learn better
   ___when you read, or
   ___when someone else reads to you?

< Listen or "hands-on"?

3. Would you rather
   ___listen to a cassette tape with information about a foreign country, or
   ___play a learning game about that country?

< Draw or act out?

4. Would you rather
   ___draw a picture about a story, or
   ___put on a skit about it?

< Write or "hands-on"?

5. Would you rather
   ___write a story, or
   ___build a display or exhibit?

6. Do you understand directions best
___when the teacher explains them to you, or
Listen or watch demonstration? > ___when he or she shows you what you're supposed to do?

7. Would you prefer to
Speak or "hands on"? > ___tell someone about a story you read, or
___build a model showing part of it?

Section B: Learning Conditions >

Some students don't care whether the room they study in has natural or artificial light, or whether there is background noise. But other students are very sensitive to these and other *environmental factors*. What about you?

Sounds >

1. When studying, do you prefer
___silence?
___soft music?
___other background sounds (such as _____)?

Lighting >

2. Do you prefer to study by
___natural light?
___overhead lighting?
___study lamp?
___intense light?
___soft light?
___other kind of lighting?

Temperature >

3. Would you rather study in a
___cool room?
___warm room?
___air-conditioned room?
___room with window open?

Seating >

4. When studying, do you prefer to
___sit in a chair at a desk?
___sit in an upholstered chair or beanbag chair?
___change type of seating several times?
___sit on a the floor on a rug or cushion?
___lie on a couch or the floor?
___other (e.g., standing, in the bathtub)?

Time of day >

5. Is your best time of day for studying
___early morning?
___morning study hall?
___afternoon study hall?
___right after school?
___early evening?
___other _____

Solo, duo, or... >

6. Do you learn best when you study
___alone?
___with a partner?
___in a small group?

< Getting started

7. Do you
___jump right into your assignments, or
___is it hard for you to begin them?
What helps you to get started? _____
What gets in the way? _____

< Managing homework

8. Do you
___prefer to schedule and manage your homework all by yourself, or
___appreciate reminders and offers of help from parents or others?

< Munchies

9. Does eating or drinking
___distract you when you are studying, or
___help you to concentrate?

< **Sense Modality Preferences**

Look over your answers in Section A, paying attention to any patterns that appear.

< An example

- If you consistently show a preference for learning activities that involve *touching* and *movement* (acting out a story, putting on a skit, building a display), then you may be primarily what educators call a *kinesthetic* or movement-oriented learner.

< Another example

- If you find that you consistently prefer learning activities that involve *listening* and *hearing* (being read to, listening to a cassette recording, hearing a teacher give directions), then you might have a predominantly *auditory* learning style.

< And another

- You might find that you learn more effectively through *two* of the sense modalities (reading and visual, say) than any of the others. Or, if you find that you don't have marked preferences between the different pairs of options, you may not have a strongly dominant style, but instead are comfortable learning through various sense modalities.

No particular sense modality preference is better than any other. The point is to be conscious of which one(s) are most familiar, enjoyable, and/or effective for you to use and how you use that knowledge to become a better learner. You can also become a more effective learner by practicing and becoming comfortable with learning through a variety of modalities.

< **Compile Your Style Profile**

Now look at your responses in Section B. These, together with your Section A answers, make it possible for you to write a "style profile" of

yourself. An example might be

A possible profile >

"I am primarily a *visual* learner. I like to make sketches when I take notes, and it helps me to be shown drawings, photos, diagrams, films, and other visual aids along with teachers' presentations. I don't learn nearly as well just from reading text or listening to lectures.

"As for *learning conditions*, I learn best when I study by myself and between supper and bedtime. My ideal conditions for studying include soft music in the background and a room that's cool from either air conditioning or an open window. Being in a warm room makes me sleepy and interferes with learning. The type of lighting doesn't matter to me as long as it's bright enough to read. I like to sit in an overstuffed chair reading, taking notes and sketching in a notebook on my lap. If I have trouble settling down to study, sipping some juice or soda sometimes helps. I don't want anyone telling me how or when to study."

Putting your style to work for you >

Once you have your style profile figured out, you can actively seek the conditions that are most helpful to your learning. You also know what kinds of things to try to avoid, and what things you are indifferent about. If you aren't sure what works best for you, you can experiment with different conditions.

You can't always control the modality or environment in which information is presented to you, but it is often possible to make or request changes that can improve your learning.

Some ideas >

If you learn well from listening to teacher lectures and from reading, you're probably doing fine, since these are the teaching methods that are used the most in the majority of schools. But what if lectures and reading aren't your best ways to learn? Here are some ideas:

Active courses >

Participate in courses and other activities that match your talents and interests — for example, sports, speech, drama (acting, set design, lighting, etc.), photography, foreign languages, outdoor survival, and food preparation.

Learners like yourself >

Talk with friends and family members about learning style. When you talk with people whose learning style is like yours, find out how they make use of its advantages and deal with any disadvantages. And give them tips about what you've learned.

Teacher conflicts >

If you're having conflict with a teacher or doing poorly in a class, there

might be a mismatch between the teacher's teaching style and your learning style. Here are some typical problems and possible solutions, and you can probably think of more:

- If it's hard for you to follow a lecture, ask where you can read the same information.
- If merely looking at mineral specimens doesn't help you learn about them, ask if you can handle them, sketch them, or both.
- If reading about an armored Revolutionary warship gets you nowhere, look for a diagram or drawing of one.
- If you can't figure out what's going on in that Shakespeare play from reading it, see if you can find an audiotape or videotape of it, and use the text to follow along with the characters as they speak.
- If giving an oral report isn't your thing, find out if you can write and perform a song on the subject. Or act it out in mime. Or prepare an illustration. Or do a dramatic reading. Etc.

< Scheduling

Your toughest class is first thing in the morning, and you just aren't a morning person. Or you tend to be sleepy after lunch, but that's when you have that civics class you aren't that excited about in the first place.

It's not always possible to change situations like this, but often it is. Explain your situation to your teacher(s) and scheduling staff, and ask if you can change your schedule.

Hint: It will help if you know something about learning styles, so go over pages 1-3 of this book.

< Your career plans

If the tasks and expectations of your job are a poor match with your learning style, you are apt to be unhappy in your work. A learner whose style involves physical activity probably won't do well at a desk job. A person whose thrives on solitary pursuits such as reading and writing probably won't like driving a bus.

Therefore... learn as much as you can, both about your style and about the careers you are considering. Is there a good fit? School career counselors can help you sort this out.

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Part 2:

Background Information

Now that you know something about your learning style, let's talk about "lifelong learning" and why it matters so much today.

The first point to be made is that yesterday's teenager did not have a pressing need for a book like this.

< Why become a lifelong learner?

There was far less attention given to lifelong learning then, and less discussion of the role of lifelong learning skills in helping people to achieve independence.

So what changed? Why are people talking about lifelong learning so much now? What, exactly, is lifelong learning, anyway? And why do you need to be ready for it?

< You learn all the time...

First, a little background. It is a time-honored truth that you can't get through life without learning things.

< ...to get what you want

Sometimes you learn because you have to in order to get what you want. Let's say you want homemade cookies, but nobody has time to make you some, so you learn to bake them yourself. Or you want a smooth-running car without paying high mechanics' bills, so you learn basic maintenance and care for it yourself.

< ...to do your job well

Sometimes you learn because somebody else wants you to. Maybe your boss at the movie theater wants you to work behind the counter, so a fellow employee trains you. Maybe you begin learning to fill orders at your part-time warehouse job, as well as just stocking the shelves. Perhaps your boss sends you to a class to learn about safe food-handling procedures or how to use some new computer software.

< ...to satisfy your curiosity

Other times you learn because you've become curious about something. Somebody mentions the Galapagos Islands again, and you still don't know where they are. So, at last, you look it up. Or you sort of know what "pushing the envelope" means, but you wonder where the expression came from. That sort of thing.

And sometimes learning happens unintentionally. There you are watching television one evening, and you learn more than you ever wanted to know about the life cycle of the anguila eel. Or you learned, without really trying, how several card games are played—just from being around your card-playing parents.

So what's different? >

Learning is a natural part of life. Until recently, though, most people have not *had* to make a continuous effort to increase their knowledge and skills throughout their lifetimes.

Now, things are changing. If you want to be successful in today's world, *you may have no choice but to become a lifelong learner*. Once an option, lifelong learning is becoming a norm.

Information explosion, information overload >

First, there's the "information explosion" we keep hearing about. And the "information overload" it's causing.

More information is being produced than ever before. And new technologies make this information widely available.

In most fields of study, information and knowledge are doubling every three to ten years. At the same time, old information is becoming obsolete.

The workplace >

Second, work environments are changing so fast that today's students can expect to switch—not just *jobs*, but *entire careers*—four or five times during their working lives.

Career changes, new skills, and of course... >

Third, employers now want a new kind of worker—a worker who can gather, sort, interpret, and evaluate, information. They also want workers who can solve problems and make decisions, rather than always depending on supervisors.

...the impact of technology >

There is a myth that technology has simplified work. It hasn't. What it has done is

- Speed up change
- Eliminate many low-level jobs
- Create jobs that require highly skilled workers

That's where you come in—you and lifelong learning.

Let's say you're a lifelong learner >

We know a lot about lifelong learners from researchers who have studied them.

Your learning attitude is upbeat >

Let's say you've become a lifelong learner. What would that mean? Well, you probably have positive learning **attitudes**, which means you're

- Curious and interested in learning new things
- Confident of your ability to learn
- Motivated to seek new learning opportunities
- Willing to be responsible for your own learning
- Willing to make mistakes and learn from them
- Persistent in tasks
- Open to constructive criticism
- Patient

Along with this positive outlook toward learning, as a lifelong learner you have **skills**:

< Your learning skills are sharp

- You can *read, write, speak, and listen* well enough to effectively take in information and express it to others.

< You communicate well

- You have *research and independent learning skills*, so you're aware of what you need to learn, and you know how to make and follow a learning plan. You also know how to identify, retrieve, and organize the information you need.

< You take charge of your learning

- You apply your *study skills and learning strategies* to understand and remember the new information you learn.

< You're a "quick study"

- You've got *higher-order thinking skills*—the critical and creative thinking skills, problem solving skills, decision making skills, and so on. With these skills you move beyond memorizing facts and formulas to understanding what they mean and how to use them.

< You go for meaning —not just facts

- You've also got skills for *"thinking-about-thinking."* Why would anybody want to do that? Several reasons:

< You know your own mind

  To know about and be able to use different strategies for tackling new learning material.

  To know when stop and reflect on how well you're understanding what you're trying to learn.

  To know how to change your strategy if you aren't "getting it."

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Part 3:

Activities for Strengthening Your Lifelong Learning Skills

Positive Attitudes Toward Learning

A person's attitude toward learning greatly influences his or her effectiveness as a learner. What can you do to have and maintain an outlook that supports learning success?

It's trite but true: Learning depends much more on effort than on natural ability. The best way to express high expectations for your success is to assume that you will be successful — and then work at making your expectation come true.

< Expect to do well

Look for connections between what you're learning in school and the "real world" of employment, further education training, and adult citizenship. You have the right to know how these things connect. Ask your teachers to explain them. Parents, too.

< What's in it for you?

Automation and technology call for a highly trained workforce, and education is the key to success in employment. But not everybody knows that. Look for opportunities to steer friends away from choices that could keep them stuck in dead-end jobs. Many teenagers who would blow off adult advice will listen to you.

< Share what you know

We hate to bring it up, but ... regular, distraction-free study time really does make a difference. This means no telephone or TV. Sorry.

< Two words: study habits

Reading

Reading is still the single most important skill for learning—at school, at home, and on the job. Here are some ideas for sharpening your reading skills.

Read to the kids >

If you have younger brothers or sisters, read to them. You become a better reader, and they love it. When you run into words that are new to them, look them up together. It's great role modeling for younger kids.

Give new information the"once over" >

Practice scanning new material before you read it in detail. You'll absorb a lot more if you first get a general sense of what it's about.

Maga-Zines >

You've got a birthday coming up? Or Christmas is coming soon? How about asking for a subscription to that magazine you're always paying good money for? Or the one you stand and read in the store because you can't afford it?

Read for pleasure? There is such a thing? >

Don't like to spend time reading for pleasure? Maybe you haven't met enough books on subjects you care about. Whether it's windsurfing, photography, or a favorite musical group, your school or public librarian can help you find reading material that will hold your interest.

Your personal file of books read >

Keep a notebook or card file of books you have read. It can be helpful when looking for new reading material or when you need to choose a topic for a school paper.

Writing

Writing skills will be an asset no matter what future education you seek or career path you choose.

What are writing skills good for? >

Interview some adults you know to find out how they use writing skills in their daily lives—at work and elsewhere. Find out if they could hold their present jobs if they didn't have writing skills.

You're supposed to write an essay, but your mind is blank >

Check out your file of books read for ideas. Or write about something you're really good at. Still not inspired? Get with a friend or family member and "brainstorm" ideas. That means writing down whatever ideas comes to mind, without judging them. Once you've brainstormed a list of possible topics, look through them for the really good ones.

Ask yourself some basic questions: Who is the audience for the essay—people who know a little about your topic? people who have never heard of it? What's the purpose of your essay—to inform? persuade? entertain? frighten? How you write your essay will depend on how you answer these questions.

< Before you start

Read it out loud. This will help you notice mistakes.

< Now that you have something down on paper

Ask someone to read over your first draft and let you know if your essay is clear and to point out spelling or grammar mistakes.

Get your family or some friends to agree to write each other notes instead of talking—for an hour or so. Do this every once in awhile. Don't worry about spelling, grammar, or punctuation—yours or theirs. The point is to get the message across. Once you're used to this, you can give each other tips on spelling, and so on.

< OK to pass notes?

Get a pen pal from another country or a different part of this country. Tell the person about yourself and ask about him or her. Use e-mail if you have the opportunity; many people find it an easy way to stay in touch.

< Write letters

Write about what's going on in your life and in your head in a personal diary or journal.

< Your private journal

If you're dissatisfied with a product, annoyed by a TV commercial, or feel misled by a label, write a letter of complaint to the manufacturer. It's fine to give negative feedback, but keep it businesslike, e.g., avoid the word "sucks."

< Letters of complaint

Speaking and Listening

In school, on the job, and in your personal life *you will get along better with everyone you will ever know* if you're a clear communicator and a good listener.

When you have an oral report or speech to give, get a classmate(s) or relative(s) to practice on. Ask them to give you some constructive feedback.

< Round up an audience

If possible, use a tape recorder to practice oral reports, speech and drama recitations, or foreign language pronunciation. If you have an assignment that calls for interviewing people, use a tape recorder for that, too.

< Record yourself

It's easy to be an active listener:

- Ask questions when you don't understand what someone is saying to you.
- Nod your head or say something to let the person know when you are listening and understanding.
- If your mind wanders, apologize to the person and ask him or her to repeat. It's better than faking it.

Want a part-time job? > A summer job?

Before you go looking for that job, be prepared to answer the kinds of questions you're likely to be asked in an interview. What are your interests? Goals? Reasons for wanting this job? Do you have relevant skills or experience that other applicants might lack? Why should the employer hire you rather than someone else? Think about these things *before* you're sitting across the desk from your prospective employer.

Research and Independent Learning

If your teachers want you to take a lot of responsibility for your own learning, you're part of a national trend.

What independent learners do >

In many schools, students are taught the steps of *independent learning*; then their teachers serve as resources to them and coach them as they carry out learning projects. The steps of independent learning are as follows:

1. Decide *what you need to learn* from the project you are starting.
2. *Set goals*.
3. *Come up with a plan* that includes tasks and activities within tasks.
4. *Develop a timeline* showing when each step of the project will be done and when the whole project will be completed.
5. Decide *what resources you need* — reference materials, knowledgeable people, supplies, other.
6. *Follow the steps* of the plan.
7. *Keep to the timeline* as much as possible, making changes if needed.
8. Pause to *consider how things are going*; review progress so far and make adjustments.

9. *Demonstrate new knowledge or skills* for peer and teacher evaluation.

10. *Receive critiques* from teachers and peers.

11. *Reflect on how things went* and what you might do to improve your performance on your next project.

12. *Follow additional learning activities* based on the evaluation.

Keep in mind that most learning consists of discovering connections and making meaning—not memorization or producing "right" answers. Independent learning means moving beyond learning isolated facts to generating ideas, trying them out, identifying relationships, and benefiting from mistakes.

< Making meaning: It happens inside you

Becoming responsible for your own learning is a big step, and you may not feel like taking it. That's normal. But keep in mind that your teachers want you to succeed and will give you help and guidance throughout each learning project. *Independent learning does not mean learning in isolation.*

< Don't feel like it?

If a teacher has given you a list of steps and or checklist for carrying out a project, good. Use it. If not, check out the Assignment Organizer in the Appendix at the end of this book. It can help you keep track of the parts of your project.

< Assignment organizer

Maybe you have a hobby or special interest you feel strongly about. Ask your teacher if you can do a project in your interest area instead of an assigned topic. *Hint:* If you have an outline of the proposed project, your teacher is more likely to agree to let you do your own thing.

< Your passionate interest

Independent learning projects typically have many steps and take a fair amount of time. Maybe you get part way through and feel bogged down. At times like this, ask for help if you need it, and remember that your independent learning skills will improve the more you use them.

< Keep on keeping on

If you know what you want to do after high school, ask your parent guardian to keep an eye out for educational or work opportunities for you. Ask other relatives and your friends' parents, too. This is *networking*, and it can be very useful.

< Let's say you know what you want to do after high school

If you haven't decided what kind of job, education, or training you want to pursue after high school, it's time to learn more. Take advantage of career-related classes and advising at school, and consider these other

suggestions:

- Talk to teenage and adult friends about their work and their plans.
- Find out what programs are offered at local community or four-year colleges. Have a school or public librarian help you.
- Search the Internet for information about jobs and educational opportunities.

If you're curious about a certain kind of job, the best way to find out what it's really like is to call and request an "information interview" with someone who has such a job. The person can also let you know what kind of education training you need in order to get a job in his or her area.

Study Skills and Learning Strategies

In the 21st century, having job-specific skills will not be as important as the ability to learn new things quickly and well.

Study skills are tactics you can use to learn and remember, and *learning strategies* are groups of these tactics organized into steps for more in-depth learning.

Taking good notes >

Ever looked at those notes you took in class and not been able to make sense of them? Here are some tips:

- It's better to write down *key words and ideas* clearly than to try to get everything down and end up writing illegibly.
- *Go over your notes soon* after you take them, so that you can fill in gaps while the lecture is still fresh in your mind.
- If you use *abbreviations or symbols* in your notes, make a list of them and the words or concepts they stand for at the beginning of your notes.

Hitting the books >

You can apply study skills and learning strategies best if you have a regular place and time for studying. And remember to take a break now and then.

Match your way of studying with your learning styles >

Go back and answer the questions about learning style (on pages 1-3) if you haven't already done so. Then do your best to match your study time and place to your learning style. Make sure your parents understand that

everyone has a different learning style, and that your way of studying might be different from other kids in your family.

You may not be able to control everything about your study surroundings, but try to avoid or minimize things that can interfere with learning, such as television, being too cold or too warm, being hungry or tired, or eating too much sugar or fat. (See the section on Learning Styles.)

< Minimize interference

Many school districts have a "homework hotline" students can contact if they get stuck while working on an assignment. Hotline teachers don't just understand the material; they're also good at explaining it.

< "Homework hotline"

No, it's not a typo. It's a learning strategy with the following steps: **S**urvey, **Q**uestion, **R**ead, **R**eflect, **R**ecite, **R**eview. The idea is to begin by *surveying* (or scanning) new learning material, then thinking up some *questions* you have about it, then *reading* it, *reflecting* on it (thinking it over), *reciting* (out loud) key things you need to remember, and finally, *reviewing* it. Many students have found this method useful, and maybe you will, too.

< SQR4

Say what? Mnemonic (ni-mon'-ik) devices are memory cues. For instance, the word *homes* can help you remember the great lakes: Huron, Ontario, Michigan, Erie, and Superior. The sentence, *My very esteemed mother just served us nine pickles* can help you remember the planets of our solar system in order of their distance from the sun—Mercury, Venus, Earth, Mars, Jupiter, Saturn, Uranus, Neptune, Pluto (OK, Neptune's orbit sometimes takes it farther from the sun than Pluto, but you get the idea). Make up your own mnemonics for the material you need to learn.

< Mnemonic devices

Putting an idea in your own words can help you remember it. You can practice doing this with a partner: When you're having a conversation, summarize (paraphrase) what the other person said before responding. This also helps develop good listening skills.

< Summarizing

By now you're an old hand at taking tests. It's still good, though, to have the following tips in mind:

< Tips for taking tests

- Read all test directions carefully.
- Review key terms:
  Compare means show similarities and differences.
  Define means explain and give an example.
  Outline means state key information in a structured way.

- Watch for terms such as *usually, not, only,* etc. that suggest how to respond to questions.
- Find out if there is a penalty for guessing.
- Skim the whole test before beginning.
- Answer only what is asked, watching for words that demand thorough responses, such as *explain* and *discuss*.

Studying with friends >

Peer study groups work well for many students, because they get the benefit of one another's knowledge and support. A word of warning, though: it only works if you stay on task.

Higher-Order Thinking Skills

Memorizing has its place, yes. But beyond that, you'll be needing to think creatively, analyze things, apply problem-solving strategies, make decisions, and put the new things you learn together with what you already know.

They're selling. > Are you buying?

Analyze magazine and TV ads. What do the ads suggest will happen if you use the sponsor's product or service? How do they try to convince you of this? Is there important information that they leave out? Do you believe the message is true? Why or why not?

Charts and graphs >

Take a look at graphs and charts in magazine and newspaper articles, and try to interpret the information in them. Do these displays help you to understand the article better? Why or why not?

Current events >

Discuss current events with friends or family members. When you make a point, tell them where you got that information and how you formed your opinion. When you generalize, give an example or two. Can you see any merit in an opposing view? Can they? Ask them for reasons and examples, too.

Controversial issues >

Identify a controversy (for example, the case for environmental protections versus the case for jobs in the logging industry). Gather information on both sides. Which arguments do you find most convincing? Why?

Make friends with your local newspaper. Go over the front page and the editorial page.

< Front page/editorial page

- Are the same kinds of issues discussed in both places? How are they similar or different?
- Do the writers of front page and editorial page articles try to be equally objective?
- Would it be a problem if an article from the editorial page were moved to the front page? Why or why not?

What's the difference between fiction and nonfiction? What kinds of programs on TV are true? Which are "just stories"? How can you tell the difference? Can a story be part true and part fiction?

< Fiction and nonfiction

When watching TV—news, sports commentary, or educational programs—pay attention to which statements are facts and which are opinions. Is it easy or difficult to tell the difference?

< Fact vs. opinion

Think about the kinds of problems that come up in everyday life—problems such as the following:

< What's your problem?

- You've been invited to go to a college basketball game with your friend's family, but you've been putting off your homework, and you probably won't get it done unless you stay home from the game.
- Your sister keeps borrowing and wearing your clothes without your permission, even though you've asked her not to.
- You want to get a part-time job, but your parents don't want you to, because they're concerned that your grades will suffer.

Name a problem you have—either one you have right now or one you sometimes have. If you never have problems (!), make one up.

Here are some tried-and-true steps for problem solving:

< Here's how to tackle it

1. *Identify the problem.* Describe it, giving details and examples.
2. *Collect information* about the problem. Make a plan for acquiring needed information, facts, and so on. (If the problem is complicated, set up a system for storing and retrieving information about it.)
3. *Interpret the information.* What does it mean? What does it show or prove?

4. *Brainstorm possible solutions.* Come up with as many solutions as possible, but do not judge them yet.

5. *Consider solutions.* What are the pros and cons of each one. For each one, ask yourself if anyone would be helped or harmed by it?

6. *Make a decision.* What are the arguments for your proposed solution? Why is it the best among the possible solutions?

7. *Act on your decision.* Do what you decided to do.

8. *Evaluate the outcome.* How well did it work? If a similar problem came up, would you handle it the same way? What would you do differently?

Thinking About Thinking

You probably have some thinking habits that help you learn and others that interfere with learning. Understanding your way of thinking can help you to think more efficiently.

"Think out loud" with a partner »

When you're trying to solve a riddle or a puzzle, "think out loud." That is, as you are going through the process of figuring out the riddle or puzzle, describe each part of the process to a partner. Then pose a riddle or problem for your partner to solve by "thinking out loud" to you.

Negative self-talk »

When you're struggling to understand something, do you tell yourself things that make matters worse? Things like, "I'm not smart enough to get this" or "I don't need to learn this"?

Negative self-talk wastes energy and can give you a low opinion of your abilities. Be aware of negative self-talk, and when it comes up, tell it you're not interested, and turn your thoughts back to the problem at hand.

Mind wanders? »

Does your mind wander when you are supposed to be listening to teachers or studying? What's getting in the way of listening attentively?

- Frequently tired or hungry in a particular class? Consider changing your eating or sleeping patterns.
- Unchallenged by what you're supposed to be learning? Ask your teacher if you can work on a special project on the subject rather than going over things you already know.

Hint: Your teacher is more likely to go for it if you have some notes or an outline about what you'd like to do.

- Distracted by a hobby? A worry? That guy or girl you're interested in?

  Try this: Set aside a period of time each day for worrying, thinking about the person you're interested in, or whatever is distracting you. Then, when these thoughts begin to interfere with your concentration, remind yourself that time has been set aside for thinking about them a little later, but that this time is devoted to listening, studying, etc.

< Positive self-talk

Get in the habit of positive self-talk. "I can do this task." "I'm going to relax, organize my thoughts, and do well on this assignment (or test)." "I have learned a lot on this subject and can write about what I know." OK, it sounds corny — but it works.

< "Thinking journal"

Keep an informal "thinking journal." What kinds of learning come easily to you? What kinds cause you to get stuck? When you get stuck, what do you do to get unstuck? How do you make sure you're really learning and not just reading without understanding? When do you check things out with another person, database, encyclopedia, etc.? Use the notes in your journal when starting a new project.

< "Mental blocks"

Do you hate word problems? Go blank at the sight of mathematical notations? Freeze up over unfamiliar words? These "mental blocks" don't need to be permanent. A teacher, tutor, or friend can show you strategies for dealing with them. Ask.

Hint: The best tutor is someone who has also struggled with a learning problem.

OK, so you've reviewed the activities in this booklet. Now go back and select a few that are of interest to you, and give them a try. You'll move yourself just that much closer to becoming a capable, independent lifelong learner for the 21st century.

Helpful Resources

*American Association of School Administrators. *Brush Up Your Study Skills: Tips for Students and Parents.* Arlington, VA: AASA, 1995 (ED 381 910).

Eisenberg, M. B., and Berkowitz, R. E. "The Six Habits of Highly Effective Students." *School Library Journal* 41/8 (August 1995): 22-25.

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Available from Educational Research and Dissemination Program, Educational Issues Department, American Federation of Teachers, 555 New Jersey Avenue, NW, Washington, DC 20001.

*Rich, D. *Summer Home Learning Recipes for Parents and Children, Grades 9-12.* Washington, DC: U.S. Department of Education, 1994 (ED 371 907).

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Assignment Organizer

Task Definition

Name Teacher

What am I supposed to do?

Research You Can Use Lifelong Learning

What information do I need in order to do this?

1.

2.

3.

4.

5.

Information-Seeking Strategies

What are the possible sources to find this information?

Which are the best for me to use?

Location and Access

Where will I find these sources?

Who can help me find what I need?

Use of Information

How will I record the information that I find?

__take notes using cards
__take notes on notebook paper
__take notes using a data chart
__draw pictures
__talk into a tape recorder
__other

How will I give credit to my sources?

Write title, author, page number

__on note cards
__on notebook paper
__on data chart

Synthesis

What product or performance will I make to finish my assignment?

How will I give credit to my sources in my final product or performance?

__include a written list (bibliography)
__after the performance, tell which sources I used
__other

Evaluation

How will I know that I have done my best? (All must be checked before the assignment is turned in.)

__What I made to finish the assignment is what I was supposed to do in Task Definition, above.
__Information found in Use of Information matches information needed in Task Definition.
__I gave credit to my sources (even if I used a textbook).
__My work is neat.
__My work is complete and includes my name and the date.

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